

P A T E N T C L A I M S

1. Fuel cell unit, comprising a cathode-anode-electrolyte unit and a contact plate in electrically conductive contact with the cathode-anode-electrolyte unit, wherein the fuel cell unit comprises a fluid guiding element connected to the contact plate in a fluid-tight manner, forming a boundary of a fluid chamber having fluid flowing through it during operation of the fuel cell unit and being formed as a shaped sheet metal part.
2. Fuel cell unit as defined in claim 1, wherein the cathode-anode-electrolyte unit is arranged on the fluid guiding element, preferably held between the fluid guiding element and the contact plate.
3. Fuel cell unit as defined in claim 1, wherein the contact plate is designed as a shaped sheet metal part.
4. Fuel cell unit as defined in claim 1, wherein the fluid guiding element and the contact plate are connected to one another by way of welding, preferably by laser welding or by electron beam welding, or by way of soldering, preferably by hard soldering.

5. Fuel cell unit as defined in claim 1, wherein the fluid guiding element has an opening for the passage of contact elements to the cathode-anode-electrolyte unit.
6. Fuel cell unit as defined in claim 1, wherein the fluid guiding element abuts on the cathode-anode-electrolyte unit via an electrically insulating seal.
7. Fuel cell unit as defined in claim 6, wherein the seal comprises mica.
8. Fuel cell unit as defined in claim 6, wherein the seal comprises a flat seal.
9. Fuel cell unit as defined in claim 6, wherein the seal comprises a coating on the fluid guiding element and/or on the cathode-anode-electrolyte unit.
10. Fuel cell unit as defined in claim 1, wherein the cathode-anode-electrolyte unit and the fluid guiding element are biased elastically against one another.
11. Fuel cell unit as defined in claim 1, wherein the fluid guiding element is provided with at least one fluid port.
12. Fuel cell unit as defined in claim 11, wherein the fluid guiding element is provided with a fluid supply channel opening and with a fluid discharge channel opening.
13. Fuel cell unit as defined in claim 1, wherein the fuel cell unit comprises an electrically insulating fluid

channel seal, the contact plate of the fuel cell unit abutting on the fluid guiding element of an adjacent fuel cell unit via said seal.

14. Fuel cell unit as defined in claim 1, wherein the fuel cell unit comprises a fluid channel seal, the fluid guiding element of the fuel cell unit abutting on the contact plate of an adjacent fuel cell unit via said seal.
15. Fuel cell unit as defined in claim 14, wherein the fluid channel seal comprises a coating on the fluid guiding element and/or on the contact plate.
16. Fuel cell unit as defined in claim 14, wherein the fluid channel seal comprises a flat seal.
17. Fuel cell unit as defined in claim 14, wherein the fluid channel seal comprises at least two separate sealing elements.
18. Fuel cell unit as defined in claim 14, wherein the fluid channel seal comprises a slide fit sealing.
19. Fuel cell unit as defined in claim 14, wherein the fluid channel seal comprises a material, preferably a solder glass, viscous at the operating temperature of the fuel cell unit.
20. Composite block of fuel cells, comprising a plurality of fuel cell units as defined in claim 1, said units

following one another along a stacking direction.

21. Composite block of fuel cells as defined in claim 20, wherein the composite block of fuel cells comprises at least one clamping element for bracing the fuel cell units against one another.
22. Composite block of fuel cells as defined in claim 21, wherein the composite block of fuel cells comprises two end plates adapted to be braced against one another by means of the clamping element.
23. Composite block of fuel cells as defined in claim 22, wherein at least one of the end plates has at least one fluid port.
24. Composite block of fuel cells as defined in claim 20, wherein the fluid guiding element of at least one of the fuel cell units is connected to the contact plate of an adjacent fuel cell unit by way of flanging.
25. Composite block of fuel cells as defined in claim 24, wherein a flange fold area engaging around the contact plate of the adjacent fuel cell unit is formed on the fluid guiding element of at least one of the fuel cell units.
26. Composite block of fuel cells as defined in claim 25, wherein an electrically insulating fluid channel seal is arranged between the flange fold area and the contact

plate of the adjacent fuel cell unit.

27. Method for manufacturing a composite block of fuel cells having a plurality of fuel cell units as defined in claim 1, comprising the following method steps:
 - Assembly of the individual fuel cell units by arranging a cathode-anode-electrolyte unit between a contact plate and a fluid guiding element and fluid-tight connection of the contact plate to the fluid guiding element;
 - subsequent assembly of the composite block of fuel cells by arranging a plurality of fuel cell units along a stacking direction and fixing the fuel cell units in their position relative to one another.
28. Method as defined in claim 27, wherein the fuel cell units of the composite block of fuel cells are braced against one another by at least one clamping element.
29. Method as defined in claim 28, wherein the fuel cell units of the composite block of fuel cells are arranged between two end plates and the two end plates are braced against one another.
30. Method as defined in claim 1, wherein the fluid guiding element of at least one fuel cell unit abuts on the contact plate of an adjacent fuel cell unit via a flat

seal or a slide fit sealing.

31. Method for manufacturing a composite block of fuel cells having a plurality of fuel cell units as defined in claim 1, comprising the following method steps:

- Assembly of several fluid guiding element-contact plate units by connecting a respective fluid guiding element of one fuel cell unit to a contact plate of an adjacent fuel cell unit by way of flanging;
- formation of a stack consisting of fluid guiding element-contact plate units following one another along a stacking direction, wherein one respective cathode-anode-electrolyte unit is arranged between two such respective units;
- fluid-tight connection of the contact plates of the fuel cell units to the respective fluid guiding element of the same fuel cell unit.